

(6)

OUTLINES  
OF THE  
THEORY AND CURE  
OF  
F E V E R,  
UPON  
PLAIN AND RATIONAL PRINCIPLES.

BY

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*To me be Nature's volume broad-display'd,  
If haply catching Inspiration thence  
Some easy passage, raptur'd to translate,  
My sole delight.*

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THOMSON.

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1781.

# DEDICATION.

## COMMON SENSE.

**Entered in Stationers' Hall.**

# DEDICATION.

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## COMMON SENSE.

**T**HOU venerable ARBITER of Science and of human Conduct, universally to be cultivated and adored! How seldom do the Sons of Æsculapius bend as humble Votaries at thy Shrine! Many of them have lamentably secluded themselves from thy irradiating Influence: some bewildered by numberless mounds of Mud, their own creation: some confounded by artificial Clouds and Darknes: and some, strange to tell! have fatally deviated from the Path  
a 2 leading

## ii DEDICATION.

leading to thy Temple, because it is *patent* and *obvious*. . . Often have they idolatrously become the steady Devotees of CHAOS, thy potent and gloomy Rival, bending to the *Fictions* of their monstrously teeming Imaginations.

If ever thy feeblest Ray has in any degree illumined my Mind, deign to accept this Dedication of "OUTLINES of the THEORY and "CURE of FEVER;" as a respectful Oblation from thy humblest Admirer,

The AUTHOR.

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## P R E F A C E.

**T**HE great advantages every man derives from Society, oblige him in the most sacred manner, as far as his talents permit, to promote its welfare and accommodation. It cannot be denied that the humane, the social exertion of Individuals to this grand object, even when unsuccessful, deserve approbation.

SOCIETY is not more interested in any circumstance, than the prevention and cure of Disease; no modification of Disease, probably not all others beside, commits such extensive depredations a-

mong Mankind, as that One, named FEVER; it is a Theme, therefore, *weighty* and *important*, and meriting *fundamental* investigation.

Medical Writings on the subject of Fever, for the most part, have ever appeared to me to be unsatisfactory, confused, unprincipled, and therefore, unphilosophical: I fear they have been not a little baneful in their practical application.

It is my earnest wish, in the publication of the following pages, to reduce the *Doctrine* and *Treatment* of FEVER to a *rational* and *salutary* simplicity. Indispensible Avocations prevent me from exhibiting a full Delineation of this grand Subject: to trace its OUT-

LINES,

LINES with, perhaps, an adventurous pencil, is all at present I can overtake.

How far I have obtained the gratification of my wish, remains with the *candid* and *impartial* to determine: these only I regard as judges, and to these alone I appeal.

I have purposely avoided all *technical* Terms and Expressions as far as possible, ambitious that it might be in the power of any Reader, commonly acquainted with Literature and Philosophy, to discern and comprehend my Sentiments and to decide upon them.

In detailing my Opinions, which is done *freely*, although altogether fearless of the consequences, I  
have

have not made any nominal or particular reference to any Author. I will disregard *anonymus* criticisms, but will respectfully join Issue in any open and candid attack. As far as my small abilities in medical Science extend, they shall be readily exerted to confute groundless objections: but to those that may be irrefutable, because founded on Truth, I will be a willing Convert.

“ *Refellere et refelli sine pertinacia  
vel iracundia paratus.*”

The Retainers of the *Pharmaceutic* practice, will probably be displeased at many of my conclusions: to such I must be permitted to declare, that, my Sentiments, which I hope are friendly to Humanity, prompt me to despise Hypocrisy, especially

P R E F A C E. 5

cially in Medicine. Were my  
powers equal to my inclination,  
Disease should cease, and Health  
spread its celestial Influence from  
Pole to Pole.

No Sigh, no Murmur, the wide world  
should hear,

From every Eye I'd wipe off every Tear.

POPE.

EDINBURGH, }  
Feb. 1781.

## ERRORS.

The following most material Errors  
of the Press, the Reader will be  
pleased to correct.

*Page 1 line 1 for local read general.*

— 13 — 4 — staunch read stanch.

— 20 — 22 before SPASM, supply febrile.

— 23 — 22 for have read has.

— 60 — 15 for Vituatic read Vitriolic.

— 74 — 14 after vegetables, supply Vinous  
Liquor and...

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## INTRODUCTION.

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### Of ORGANIZATION.

#### I.



*Definition.*

**N**ATURAL Arrangement of ultimate component Parts into *Fibrous* and *Vascular* Structure, Animal or Vegetable.

#### II.

Animal and Vegetable Bodies derive their respective Power and special

## 2 INTRODUCTION.

cial Qualities from Organization (I.)  
ineffably peculiar and delicate.

### III.

Animal Body, capable of various *Actions* and *Functions*, is possessed of *Life*, *Animation*, or the *Vital Principle*, and constitutes an *Oeconomy* or *System*, whose parts must be endowed with *Feeling*, *Sensation*, or *Sensibility*, in various degrees.

### IV.

HEALTH, or a *sound state* of the Animal Body (III.) must therefore consist in, or be the immediate effect of *perfect animated ORGANIZATION*.

### V.

DISEASE, or a *morbid state* of the Animal Body, must likewise consist in,

## INTRODUCTION. 3

in, or be the production of an *alteration* or *derangement* of Organization. This, obviously, may be various in kind and in degree.

### VI.

Disease (V.) may be either *general* or *local*, the former invading the *whole* system, (III.) the latter only *a part* of it.

### VII.

Morbid derangement of Organization (V.) is *palpable* or *impalpable*: the former constitutes the *local* diseases, the latter the *general* ones. (VI.)

### VIII.

MATTER inducing morbid derangement, (V.) is *palpable* or *impalpable*:

A 2

the

#### 4 INTRODUCTION.

*general*  
the ~~these~~ diseases (VI.) are wholly or chiefly induced by the latter, it is therefore named *morbific matter*, or *deranging cause or power*.

#### IX.

Morbific Cause (VIII.) is denominated *remote or proximate*.

#### X.

Remote Morbific Cause (IX.) is denominated *predisponent and occasional*.

#### XI.

Predisponent Morbific Causes (X.) seldom, if ever, produce *complete* morbid derangement; (V.) they only *favour* the impression or action of occasional ones.—Their whole effect, therefore, only produces or constitutes  
MORBID PREDISPOSITION.

#### XII. Oc-

## INTRODUCTION. 5

### XII.

Occasional Morbific Causes or Powers (X.) are capable of themselves *suddenly or immediately* by their *direct* action, to occasion or create Morbid Derangement: They are often sufficiently powerful to produce this effect *without the co-operation* of predisponent ones (XI.)

### XIII.

Proximate Morbific Cause (IX.) is constituted by the *whole derangement* of healthful Organization (III.) induced by the Action of the remote ones (X.)—It is therefore more properly to be regarded as a *Disease* (V.) or *Morbid State* than a *Morbific Cause*: its nature and existence are to be ascertained from the *Changes* in the Functions named SYMPTOMS, which it *directly or indirectly* excites.

## 6 INTRODUCTION.

### XIII.

A PLASTIC POWER, which Animal as well as Vegetable Nature observably inherits, is often adequate to the RECTIFICATION OR CURE of Morbid Derangement (V.)—Its operation may be named *Plastic*, or *Healing Process*.

### XV.

The Plastic Process (XIII.) tends *directly* to the Cure of Disease (V.) —MEDICINE OR ART possesses little or no *immediate* influence over it,—is only capable to *assist* and *co-operate indirectly*.—The curative means Art employs are named REMEDIES.

Of

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## *of* F E V E R.

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### XVI.

#### *Definition.*

**M**ORBID alteration of the healthful degree of Vigour;—Of the Circulation of the Fluids;—Of Secretion;—Of Temperature;—Of Sensibility;—Of Sleep;—Of Reflection: preceded by Shivering, often combined with more or less Putridity.

### XVII.

FEVER, (XVI.) excited by any pre-existing

existing disease, (V.) is only a *Symptom*, and consequently denominated SYMPTOMATIC: When not thus excited, it is termed IDIOPATHIC: the latter only is *primary* and *proper* Fever.

## XVIII.

## SYMPTOMS.

1. *Altered degree of Vigour.* (XVI.) The natural or healthful degree of Strength or Vigour, is suddenly altered, for the most part diminished, upon the accession of Fever (XVI.)—This morbid change is named *Debility*, *Lassitude*, *Listlessness*; its existence is manifested in every function; it is a constant symptom of the febrile state, immediately connected with its proximate cause.

## XIX.

2. *Altered Degree of the Circulation of the*

*the Fluids.* (XVI.)—In health, the circulation or motion of the Fluids is *equable* and *proportioned* in every part of the system, (III.) the reciprocal degrees of sensibility and action which the Vessels and Fluids possess, and on which this depends, being justly balanced.—In Fever, the proportion is destroyed, the pulsation or vascular action variously forceful, is always more frequently repeated than in health, and the dispersion of the Fluids less equable, often creating *local Pain, Congestion, Inflammation, Effusion, &c.*—This symptom, altho' secondary, because it does not flow immediately from its proximate cause, is essential to the existence of Fever.

## XX.

3. *Altered Degree of Secretion* (XVI.)  
—The moisture and lubricity of the surfaces of the several component parts and organs of the system, and therefore

fore the perfection of its healthful functions depend greatly on due secretion.—When this becomes unequal or diminished, *dull Eyes, dry Skin, parched Tongue and Throat, Thirst, altered Urine*, sometimes *Costiveness*, are the consequences.

## XXI.

4. *Altered degree of Temperature* (XVI.)—Animal Heat, from whatever source it flow, is observably very much proportioned to the degree and regularity of the motions of the Fluids (XVI.) and state of Secretion (XVI.)—In Fever it is very considerably *increased*, and is an essential, although secondary, symptom of the Febrile State, not immediately originating from its proximate cause (IX.)

## XXII.

5. *Altered degree of Sensibility* (XVI.)  
—Feeling

—Feeling or Sensation in every part of the healthful System (VI.) is justly calculated to sustain the degree of impression which it is finally destined to suffer; the regularity and proportions of all the functions depend chiefly on this circumstance.—In Fever sensibility is in general *unequally increased*; hence *Pain of the Head and Back*, sometimes *Inflammation, Congestion*; *diminished Appetite* for solid food, *Squeamishness, Vomiting*; sometimes *Looseness, Anxiety, general sense of Weight and Oppression*.—This is an essential and prime symptom of the febrile state, and gives modification and degree to many of the others.

## XXIII.

6. *Altered State of Sleep* (XVI.)

—An equable and moderate degree of Temperature, of Sensibility, and of Motion of the Fluids, are observably conducive, if not essential, to healthful

ful Sleep.—In Fever, it is *scanty, unrefreshing*, and more or less *disturbed*; a *comatose*, or *profound febrile Sleep* is always produced by, or attended with Congestion in the Head.

## XXIV.

7. *Disturbed Reflection* (XVI.)—A due exercise of the mental powers incontestibly flows immediately from a healthful state of the nervous System. In Fever, therefore, *Raving* and *Wavering of Reason*, more or less constantly prevail.—It is in general a prime Symptom.

## XXV.

8. *Putridity* (XVI.)—More or less early in the course of Fever, according to circumstances, the system, fluids, and solids, not refreshed nutritiously by a due quantity of fresh  
alimentary

alimentary materials, verges proportionally to the *PUTRID* or *SALINE STATE*; hence *Spots, Blotches, discharges of Blood, Purging, stanch* of Breath, of Sweat and of Excrement. This is rather an *accidental* than *necessary* circumstance of Fever.

## XXVI.

The Symptoms of Fever (XVI.) observably *vary* very considerably in *Degree*, in *Modification*, in *Time of accession* from *Causes*, *Habit*, *Situation*, and *accidental circumstances* ; a Source from which originate all its VARIETIES,—INFLAMMATORY,—MIXT,—NERVOUS,—MALIGNANT,—SPOTTED,—PUERPERAL, &c.

## XXVII.

## REMOTE CAUSES.

*Predisponent Causes (XI.)—A delicate.*

*cate, weak, and impressible Organization,* (I.) arising from *Age, Temperament, Sex,* or other circumstances, may be presumed to favour the accession of Fever, (XVI.) or to constitute FEBRILE PREDISPOSITION. (XI.)

*Occasional Causes,* (XII.)—EFFLUVIA, or CONTAGION, *peculiar, subtile, invisible, poisonous, extremely active,* coming in contact with the living Body, in due degree, Observation manifests, possess the power to *occasion or excite* Fever, or to become a deranging febrile Power, often so irresistible in its impression, as to require no co-operation from Predisposition. (XI.)

## XXVIII.

The *precise nature* of Contagion (XXVI.—XXVII.) The deranging power most frequently and immediately exciting Fever, it is difficult, perhaps impossible to ascertain: Although *subtile*, it is incontestibly *material*

*terial*.—The specific nature of the contagion of Small-Pox, Measles, &c. which excite febrile Commotion, is equally unknown.—It appears from circumstances attending the management of Plague (a Fever of the worst kind) that its Contagion cannot be waisted to any great distance in the Atmosphere.

## XXIX.

Fever, or *febrile Commotion*, is observably not seldom induced by *diminished temperature of the atmosphere* or COLD, by its *increased temperature* or HEAT, and many other causes, in which there can be no suspicion of Contagion or morbid Matter (XXVI.)

## XXX.

## PROXIMATE CAUSE.

Facts and Reason universally con-

cur to manifest, that Life, Health, and consequently all the Functions of animal Nature, are effects or productions of a peculiar Organization, (II.) suited by CREATIVE WISDOM to the final rank and mode of the Individual possessing it.—It is therefore an uncontrovertible induction, that the *derangement* of Animal Organization, by the action of remote *morbific* Causes, must necessarily be followed by DISEASE, and if to a sufficient extent, by DEATH: And that the *specific* derangement, produced by *febrile* Causes, is the PROXIMATE CAUSE of Fever, and the *mediate* or *immediate* origin of all its Symptoms (XVI.—XXV.) and Effects.

## XXXI.

It will not be denied, that *febrile*, as well as all other deranging Powers, must *impress* the component Parts of the living Animal Body, in proportion to their *respective sensibility* and *delicacy* of  
of

of Organization.—The whole *nervous System*, especially its *sentient Extremities*, exquisitely expanded upon every point of the extensive surface of the Body, will be therefore *primarily* deranged, or morbidly affected, by the direct action of febrile Causes, and become of course, the *principal seat* of the Proximate Cause.—*Sudden diminution* of healthful Vigour, a *sense of confusion* and *pain* of the Head, &c. tend to prove this circumstance.—Thus, a Mildew or freezing Temperature of the atmosphere, happening in Spring, deranges Vegetation in proportion to its delicacy; its effect gradually proceeding from the tenderest parts of the tenderest Plants, to the more resistant,—the Flowers, the Foliage, the Stem, &c.

## XXXII.

Although the derangement of the sentient parts of the Animal System, (XXXI.) affirmed to be the proximate

Cause of the Febrile State, (XXX.) because induced by its remote Causes, be *impalpable*, or not demonstrable *visibly* or *anatomically*, like its grosser morbid Derangements, *Swelling, Wound, Ulcer, Luxation, &c.* it cannot justly be denied, that it is *equally real*.—Its observable Effects, or the Symptoms already detailed, immediately originating from it, convincingly prove its existence.—Where is the Anatomist who will pretend to discriminate betwixt a portion of *dead* and *living* Brain, the circumstances of Bleeding and Motion abstracted, which must be possessed by the latter? Yet by the supposition, the derangement of the former is *fatal* (it may have been *febrile*) therefore *real*; but it is *impalpable*.

## XXXIII.

Notwithstanding the conclusive perspicuity and beautiful simplicity of the Doctrine of the proximate Cause.

of

of the febrile State as detailed, it has been hitherto overlooked, and DEBILITY, SPASM, &c. have been substituted.—Attempts have been made to support these opinions by systems of argumentation, in themselves not a little *obscure* and *unintelligible*, and in their consequences probably *hurtful*.

## XXXIV.—

DEBILITY is a comparative term expressive of diminished Vigour ; but healthful vigour is incontestibly the direct production of healthful Organization ; Debility must of course be the immediate effect of deranged Organization ; it is obviously therefore, only a *Symptom* of the febrile State, of which it is fallaciously affirmed to be the *Essence* or *proximate Cause*.

## XXXV.—

Diminished Vigour or Debility,  
(XXXII.)

(XXXII.) must either suffer *two Modifications*, or flow from *two opposite States* of the Animal System.—That which is the *sudden* and *direct* effect of the impression inflicted by *febrile* deranging Powers, must be greatly different from that which remains after the *cessation* of Fever, or is produced by *Waste* and *Emaciation* of the component Parts of the Body.—The former flows from obstructed nervous Energy, the Texture of the muscular parts remaining unwasted and undiminished; the latter, probably, from a diminution of the Cohesion of the muscular Texture, considered as a simple Solid, emaciated and wasted, the nervous Energy not obstructed.—The former may be termed *febrile*, the latter *chronic* Debility.

## XXXVI.

*Febrile* SPASM (admitting its existence in Fever, which however still remains to be

be proved) whatever definition be imposed upon it, can only be a *Modification* of muscular Action.—It is not alledged to be *Elasticity* of the simple Solid, and therefore must be the effect of *pre-existing* Derangement of the nervous System, the source of Action and Motion; consequently cannot be the *proximate Cause* of the febrile State, nor a *part* of it; independently of the inconceivability of its flowing from *Debility*, while itself implies the presence of *Vigour*.\*

## XXXVII.

If it has been demonstrated that Debility and Spasm *seperately*, can never become proximate Causes of Fever, it will not be a little absurd to contend, that *combinedly*, they may constitute it; then indeed two Negatives would form a Positive.

## XXXVIII.

\* *Atonia gignit Spasnum.*

## XXXVIII.

The whole Symptoms of Fever easily receive a *rational* and *satisfactory* explanation from the Proposition, that "specific Derangement of Organization is its Proximate Cause," they flow from it natively and necessarily, as from a centre.—*In vain* hitherto, has this been attempted from the Hypothesis, that Debility and Spasm, or both, are its Proximate Causes. It also leads to conclusions in the Cure of Fever equally *rational* and *simple*, as will afterwards appear.

## XXXIX.

The Febrile State once established, generally endures for a length of time, more or less considerable.—Its *protracted Course* or *Duration* is perhaps ascribable to one of two Causes.—Either,

1. To the *degree* of Derangement  
instan-

instantaneously inflicted by the Febrile Contagion, supposed in consequence to become effete, and to produce no posterior Impression.—Or,

2. To the Derangement induced by the first assault of the Febrile Contagion, augmented afterwards by its *Presence and continued Action*.

Analogy of the action of *Poison*, and the circumstances of *poisoned Wound*, favours the assumption of the latter, as the cause of the Duration of Fever, which must be necessarily various.

## XL.

The *Quantity* and *Duration* of the Febrile State must necessarily be in proportion to the *derangement of Organization*, which must be as the *force* of its causes; the futility therefore is obvious, of supposing that the course of the varieties of Fever ~~is~~ *has* certain

*has* *certain Limits*, or will be terminated on certain days, named therefore CRITICAL DAYS : it is refuted by daily Experience.—The prevalence of this opinion, like the pretensions of the ancient AUGURS, is possibly the effect of superstition, the creature of Ignorance, which is more or less blended with Science in certain stages of its progress.

#### XLI.

#### Of the EVENT.

A just *Estimate* of the termination of Fever, whether in RECONVALESCENCE or DEATH, or a *Rectification* or *total Destruction* of vital Organization, can only be formed from a *comparative View* of its Quantity, collected from the intensity of Symptoms ; therefore a work of Experience. Much expectation may always be entertained from the Plastic Process. (XIV.)

#### XLII.

## XLII.

## Of the CURE.

The *Causes of Death* from Fever, must either be the *irreparable Degree* of derangement of Organization, suffered by the sentient parts of the Animal System; or the *accidental Enormity* of one or more of its Symptoms; Observation and Dissection demonstrate the truth of this affirmation.

## XLIII.

Attempts suddenly to *arrest* or *extinguish* the Febrile Course, have generally proved *unsuccessful*.—Indeed from Analogy there is no reason to entertain an opposite expectation; the grosser and more palpable Derangements, cannot by any means be instantaneously rectified.—Effays to this purpose, can never be *indifferent* or *innocent*; most frequently they are likely to be de-

C *structive*;

*structive* ; it is to be feared they have not seldom been *fatal*, as well by *increasing* the Derangement of Organization, as by *impeding* or *extinguishing* the Plastic Process. (XIII.)

## XLIV.

It is warrantable to conclude from the preceding Argumentation, that the *direct removal* of the Proximate Cause of Fever, or the *rectification of the febrile Derangement of Organization*, must chiefly be left to the Plastic Process, (XIII.) which is experimentally equal to this task within certain Limits. — These obviously ought *never* to be defined; they are often more extended than presuming ART is disposed to admit: and not seldom struggle successfully against its preposterous Interference.

XLV.

XLV.

PRINCIPLES of CURE.

From a review of the Causes and Nature of Fever (XXX.) thus exhibited, the following CURATIVE PRINCIPLES are natively deducible.

I. PROMOTION of the *Plastic* or *Healing* Process. (XIII.)

II. ALLEVIATION of *Enormous* Symptoms. (XIII.)

XLVI.

FIRST PRINCIPLE.

The first Principle in the Cure of Fever, (XLV.) evidently implies,

I. The Removal of febrile Causes. (XXVII.)

II. The Avoiding of every Application that tends to derange or disturb the Plastic Process. (XIV.)

## XLVII.

The Removal of occasional Causes (XLVI.) is of obvious necessity, and is effected by extreme Attention to CLEANNESS: this includes,

1. VENTILATION, or a proper atmosphere.
2. BATHING, tepid, general and partial.
3. CLOATHS frequently cleaned.

The advantages of this Management, sanctioned by Facts and Deduction, are obvious and important, and never to be neglected.

## XLVIII.

The Avoiding of deranging Measures and Substances, (XLVI.) a practice highly

ly rational, implies exemption from undue Degrees of

HEAT,

LIGHT,

NOISE,

AGITATION,

RETENTION of Excrementitious Matter.

These Degrees ought evidently to be moderate, because deranging. For the same reason, many applications, *erroneously* supposed to be *curative*, must be interdicted; namely,

1. EMETICS, or Vomiting Substances:

2. SUDORIFICS, or Sweating Substances:

3. EPISPASTIC, or Blistering Substances.

## XLIX.

## EMETICS.

Emetic, Vomiting, or Nauseating Drugs, have been hitherto almost universally administered during the Course of Fever, (XVI.) especially at its Commencement, under various PRETEXTS. The following are chief ones :

1. To evacuate *Morbific Matter* or *Noxious Substances* from the Stomach and first Passages.

2. To *second* the operation of Spontaneous Vomiting.

3. To remove *Spasm of the extreme Vessels*, supposed to exist, and to give Duration to the Fever.

4. To *shake off* the Fever.

## L.

The most commonly employed Emetics

metics (XLVI.) are, *Ipecacuanha-root* and *Antimony*: This last, combined with vegetable Acid; or variously calcined, and named *Antimonial Wine*,—*Emetic Tartar*,—*Nitrated Calx of Antimony*,—*James' Powder*.

Antimonial Preparations, on account of their activity, have obtained a preference in attempts to cure Fever (XLIII.) and their application has been persisted in, not only for *Hours*, but *Days* successively.

LI.

The Effects of Emetic or Nauseating Substances (XLVIII.) in Fever, appear to be not only *negatively*, but *positively* Destructive and Deranging, in whatever light they may be considered.

LII.

The first Pretext for employing Emetics

metics in Fever (XLVII.) is *groundless*. There is no *Morbific Matter* in the Stomach, at least not any removable by Emetic Action. The remains of Food, or other matters effused in the Stomach or neighbourhood, such as Bile, &c. supposed to be *Noxious*, will be readily and completely Ejected by Spontaneous Vomiting, a very constant Symptom of Febrile Attack. (XXII.)

## LIII.

The second. Pretext for employing Emetics in Fever, (XLVII.) however specious, is abundantly *ambiguous*. It has been shewn, that *Febrile Spasm*, (supposing its existence) can only be a *Symptom*, not a *Cause* of Fever, or of its Duration. (XL.) A removal of it, although procurable by Emetic Action, can therefore only be *temporary*, because it will recur while its Cause remains; but its Cause is the *Proximate Cause* of Fever, which is more likely

likely to be *rivettted* and *extended* than removed, or even alleviated by Vomiting.

## LIV.

The third Pretext for employing Emetics in Fever (XLVII.) is *fallacious*. It has been affirmed, that Spontaneous Vomiting, connected with Fever at its accession, is a *Symptom* originating from its Proximate Cause, (XXII.) not more therefore than any other to be regarded as a *salutary* or *healing Effort*, to be artificially seconded and promoted. Viewing it as the effect of the dictate of an *imaginary semi-rational Power*, named VIS MEDICATRIX, supposed to preside over the motions of the Animal Oeconomy, is a *hurtful Delusion*. It is a Symptom constantly of *Compression* of the Brain; of *Inflammation* of the Brain, of the Stomach, &c. of *great Loss* of Blood, &c. and is imputable, with equal justice, to the superintending influence of *the same Power*. But  
how

how Deranging and Destructive in these Affections would be the Effects of Emetics!

## LV.

The fourth Pretext for employing Emetics in Fever, (XLVI.) is too *indefinite* and *unphilosophical* to merit serious refutation. The idea of Curing Fever, by *playing at Foot-Ball*, does not appear more ridiculous.

## LVI.

The *Mechanical* effects of Vomiting are obviously *Distracting* and *Deranging*, and must therefore not only not favour and promote the Plastic Process (XIV.) in Fever, but may *perniciously* disturb, and *fatally* extinguish it. The Fluids are impelled by it with uncommon *force*, and in unusual *quantity*, to the numerous and delicate vascular branches, intermixed with every

every fibre of the Brain, (to which a Morbid Determination often pre-exists;) and Nervous System, the immediate Seat of the Proximate Cause of Fever, (XXXI.) and of the Plastic Process. (XIIII.) *Flushed Face, Flow of Blood from the Nose, &c.* are often its distracting visible Consequences.

## LVII.

Vomiting, from what is premised, (LVI.) may not unjustly be regarded as *violent Exercise, peculiarly ill-timed and distracting* in Fever. Candid Experience, it is much to be feared, can furnish too many Instances, not seldom *fatal*, in proof of this assertion. It is therefore as a Power negatively and positively Deranging, *rationaly* reprobated.

Who administers Emetics to Cure the *grosser* Morbid Derangements, Wound, Fracture, &c? They might be exhibited as rationally in the Cure  
of

of these, as in that of Fever. It is astonishing and lamentable, that their employment in Fever hitherto has been so *promiscuous* and *general*. Humanity recoils from the idea, and wishes to veil the consequent Havock.

## LVIII.

## SUDORIFICS.

Sudorific, Diaphoretic, or Sweating Substances, (XLVI.) have been very generally and hurtfully administered in attempts to Cure Fever, under various Pretexts: Such as,

1. To *expel* Morbific Matter.
2. To *second* or *imitate* Spontaneous Sweating.
3. To *remove Spasm*, supposed to exist in the extreme Vessels of the cutaneous Surface.

## LIX.

The first Pretext under which Sudorifics (LVI.) have been employed in Fever, is *preposterous*; because, if the Morbific Matter, after its first impression becomes effete, (XXXIX.) its Evacuation, although practicable by Sudorifics, is *unnecessary*: In due time it will be ejected spontaneously. Or if after its first impression its Deranging Activity continue, it must be either intangled in the solid, or promiscuously blended with the fluid Parts of the Body, or both, and therefore not dischargeable by Sudorifics, however powerful. Those supposed specially qualified to produce this effect, were named *Alexipharmics*.

## LX.

The second Pretext under which Sudorifics have been employed in Fever, (LVI.) is probably *not less fallacious*

D

than

than that urged in vindication of the utility of Emetics. (XLIX.) *Spontaneous Sweating*, like *Spontaneous Vomiting*, is not unfrequently a native or accidental Symptom of Fever; if at any time connected with a salutary Tendency, it is rather the *Effect* than *Cause* of it: therefore not to be industriously solicited by Sudorifics. If Sweating were warranted by experience, *plentiful tepid Dilution* or Drink would obviously be the least deranging Means of procuring it.

## LXI.

The third Pretext under which Sudorifics have been employed in Fever, (LVI.) seems not only to be *ambiguous*, but *preposterous*; because the existence of *Febrile Spasm* is not satisfactorily demonstrated; and although this were effected, it might be removed or relaxed, by means less Deranging of the Plastic Process. (XIV.)

## LXII.

## LXII.

The Idea of removing, or rather overcoming the supposed Spasm of the extreme Vessels, by the action of Emetics and Sudorifics in Fever, impelling forcefully the Fluids to the Surface, is obviously *rude* and *mechanical*, and opposite diametrically to the action of the Plastic Process. (XIII.)

## LXIII.

Sudorifics.—*Contrayerva Powder, Volatile Alkali, Emetics blended with Opium, &c.* produce Sweating, chiefly by their stimulant Power, augmenting Motion, and Animal Heat, therefore destructively deranging, and justly reprobated in Fever; in which these circumstances already prevail to a Morbid Degree.

## LXIII.

## EPISPASTICS.

Epispastic or Blistering Substances, sometimes named (Sinapisms), contrary to every rational Idea, have very universally been applied to the Surface of the Body in Fever. (XVI.) The Head, the Back, the Arms, the Thighs, the Ankles, the Feet, &c. have suffered their depredations in succession. Sensibility or Delicacy of sensation, whether derived from Sex or Constitution, has in vain solicited exemption from their undistinguishing Carnage.—Because, by their action, Disease is superadded to Disease; Excoriation, Inflammation, and sometimes Strangury to Fever. They are manifestly deranging Powers, and therefore are ill suited to *promote* or *second* the Plastic Process in the Cure of Fever. (LV.) The following are the

the most noted Pretexts alledged in apology for their employment.

1. To *remove Spasm* of the extreme superficial vessels.

2. To *excite the Motions* of the Body.

## LXV.

The first Pretext for employing Epispastics in Fever (LXIII.) is *ambiguous*. It has been already shewn, that Spasm, (admitting its existence) can only be a Symptom of Fever, (XXXVI.) but no Application seems better suited to augment and confirm Spasm, than Epispastic matters, especially *Spanish Flies*. Inflammatory Derangement, which has been alledged to consist in Spasm, is the direct *effect* of their action. They can only occasion a slight Determination of the circulating Fluids to the small portion

of the Surface of the Body they cover, an event which would seem to counteract any general *antispasmodic* effect expected from them; because a *Determination* to one Point, necessarily infers a proportional *Revolusion* from every other one.

## LXVI.

The second Pretext for the application of Epispastics in Fever, (LXIII.) although admitted to be valid, can seldom exist; because an *Excess of Excitement, Motion, or vascular Action*, is greatly essential to Fever, and requires rationally to be circumscribed and checked rather than stimulated, as will hereafter appear.

## LXVII.

That Epispastics abstract a portion of the *Serosity* of the circulating Fluids

Fluids is manifest, (it is their chief effect) but in so far they destroy *the proportion* of the several component parts of the common Mass; a Change which may as readily happen to be *hurtful* as *beneficial*: unless therefore in cases of topical Pain, Congestion, &c. existing after due Abstraction of Blood has been premised, they are not admissible in the Cure of Fever.

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## LXVIII.

## SECOND PRINCIPLE.

The second Principle of Cure in Fever, (XLV.) as its application consists in a *just* and *comparative* Discrimination, demands a full exertion of *discerning Experience*. Happy, thrice happy the Sick, to whom Heaven sends Practitioners duly possessing this quality!—This leads to a

REVIEW

## REVIEW of SYMPTOMS.

## LXIX.

*Altered Degree of Vigour. (XVIII.)*

Diminished Vigour or Debility, at least in some of the Functions, is more or less manifest and essential to Fever; its degree is ascertained from the general complection of the Fever, particularly from the *condition* of the Pulse. It has been shewn to be the immediate effect of Febrile Derangement of the Organization of the Nervous System, and consequent obstruction of its Energy. (XXXV.) It is *directly* removable by the Plastic Process only, and not *instantly*, but *indirectly* by Remedies. (XV.) When Debility therefore is deemed *enormous*, the most *natural* Remedy for effecting its alleviation, by seconding the Plastic Process, is a *frequent* and *proportioned* administration of ALIMENT.

## LXX.

LXX.

VEGETABLES and VINOUS LIQUORS are the most suitable cordial alimentary Articles, for many reasons, in Fever. (LXIX.)

LXXI.

DRUGS or Pharmaceutic Matters, can have no permanent cordial Influence in Fever; on the contrary, they often produce a destructive one, by disturbing the digestive Function of the Stomach, and consequently proportionally impeding the Assimilation and nutritious Application of the Aliment, the only SUBSTANTIAL CORDIAL and CERTAIN SOURCE of permanent Vigour.

LXXII.

It is confidently affirmed, that a  
Pint

Pint of *Panada* or *Gruel* will more permanently obviate and alleviate Debility, than a proportionate quantity of any Drugs named ostentatiously *Stimulant* and *Tonic*; especially if the *primary* Febrile Debility (XXXI.) has been increased by accession of *Putridity*, (XXV.) a circumstance likely to happen in the advanced stages of Fever.

## LXXIII.

*Altered Degree of the Circulation of the*  
FLUIDS. (XVI.)

It is admitted, that the Circulation of the Fluids becomes quickened and unequable in Fever; a degree of it is essential to its Existence. It has been shewn to be the immediate or secondary effect of the Febrile Derangement of the Organization of the Nervous System, and altered state of Sensation of the vessels,

fels, thence originating; (XIX.) its *Enormity*, sometimes producing Congestion, Inflammation, Effusion, &c. in various parts of the Body, (which would seem frequently to be a *fatal* circumstance,) is ascertained by attention to the *strength* and *frequency* of the Pulsation of the Arteries, to the existence of *topical Pain*, *Oppression*, *Raving*, &c.

## LXXIV.

It will not be denied, that the *Quantity* of the Blood or Circulating Mass, to a certain degree, contributes to its own *Motion*; and consequently to the production of the effects of its *Enormity* in Fever now recited. (LXX.) The *Alleviation* of these obviously requires its *proportional* Diminution: which being a *powerful* Remedy, (XV.) is to be conducted with much discretion.

## LXXV.

## LXXV.

The quantity of the Blood or Mass of Fluids, in Circulation, is diminished *directly* by

## 1. BLOOD-LETTING.

## 2. PURGING.

*indirectly* by

## 3. ABSTINENCE.

## LXXVI.

## BLOOD-LETTING.

Abstraction of Blood, Blood-letting, Bleeding, effected—Through an Opening or Wound of any of the larger Branches of the vascular System, from the sudden diffusion of its effects, is named *general* Blood-letting—Through Openings of its smaller or extreme Branches,

Branches, its effects being diffused more gradually, is named *topical* Blood-letting. It is easily demonstrable, that the ultimate effects of both Modes are necessarily *the same*. The general Blood-letting, therefore, as being *most commodious*, may, for the most part be so managed, as to supersede the topical One; the former is performed by the *Lancet*; the latter by *Cupping* or *Leeching*. This last is obviously a *less deranging Mode* than Cupping, and therefore more eligible in Fever.

LXXVII.

PURGING.

Purging diminishes the quantity of the Mass in Circulation, by abstraction of a portion of its *serous* part, which so far as it alters the proportion existing betwixt it and the others, is a Mode more exceptionable than Blood-letting, and in general may be superseded by it.

E

LXXVIII.

## LXXVIII.

The Substances which produce Purging, named CATHARTICS, act by stimulating the Intestines or Bowels; by which the secretions performable there are augmented; hence their Effect. But they are deranging in proportion to their stimulant Power, therefore proportionally exceptionable in Fever, because adding to the Disease, or impeding the Plastic Process. (XIII.)

## LXXIX.

From what is premised, (LXXVIII.) when Purging is indicated, the least stimulant Cathartics are obviously to be preferred. The NEUTRAL SALTS possess this character.

## LXXX.

A wide distinction evidently exists  
betwixt

betwixt a *mere discharge* of Excrementitious Matter from the Intestines, and *Purging* considered as a means of directly diminishing the quantity of the Fluids in Circulation;—the former is simply the Removal of offensive Matter from the Surface of the System, and is included under the first Curative Principle. (XLVIII.)

## LXXXI.

## ABSTINENCE.

It is a demonstrable Truth, that Abstinence from food ultimately, altho' not directly and instantly, diminishes the Quantity of the Fluids in Circulation, as certainly as the direct Means now recited. (LXXV.)

## LXXXII.

In Fever, diminished Appetite for solid Food, is a Symptom, or effect of

a Symptom, (XXII.) and constantly, in a greater or less degree, prevails. Abstinence therefore spontaneously and necessarily operates. It is not intentionally as a Remedy to be too much inculcated, because it is the chief and most natural Agent to counteract Putridity, one of the most formidable Events in Fever.

## LXXXIII.

Excessive Abstraction from the quantity of the fluids in Circulation, as a deranging Power fundamentally subversive of the Plastic Process, (XIV.) is anxiously to be avoided. It is an Error, slowly, if at all, reparable in the Cure of Fever.

## LXXXIV.

*Altered Degree of Temperature. (XXI.)*

It has been shewn, that increased  
Temperature

Temperature of the Body in Fever, connected with increased degree of Circulation of the Fluids, and consequently with increased vascular Action, is not the immediate Effect of the Proximate Cause of Fever. (XXX.) It is therefore a plain Induction, that Febrile Temperature, or Animal Heat, become enormous, (ascertained by comparison) will re-act and form a *Stimulant* deranging Power, and of course not only augment itself, but also the other Symptoms.

## LXXXV.

The Enormity of Febrile Temperature, (LXXXIV.) must obviously be alleviated *indirectly*, by the action of the Remedies enumerated, as tending to moderate the course of the Circulation of the Fluids (LXXIII.); and *directly*, by the contact of every substance of inferior Temperature, or which contain less Heat or Fire: They

are named REFRIGERANTS; the most commodious Applications of this character are,

1. COLD AIR.

2. COLD DRINK and FOOD.

3. COLD BATH.

#### LXXXVI.

#### COLD AIR.

Ventilation, or a Free admiffion of Air, as a means of removing occasional febrile Causes, or as a *negative* Remedy in Fever, is comprehended under the first Principle of Cure. (XLVII.) Occasionally by proper management, it is convertible into a *positive* and powerful Refrigerant Remedy. (LXXXV.)

#### LXXXVII.

## LXXXVII.

Fire, and consequently Animal Heat, is naturally diffusible through matter of every diversity; or rather cannot be circumscribed or confined: consequently is abstracted proportionally from Bodies of a higher, by Bodies of a lower Temperature, according to their respective Capacities of transmitting or retaining Fire.

## LXXXVIII.

The Temperature of the human Body in Health raises the Mercury in Farenheit's Thermometer to about the 96th degree, and in Fever it mounts it proportionally higher. That of the Atmosphere seldom is so great as to raise it to 60 degrees in the Temperate Zones. It is then evident, that Air may powerfully, constantly and usefully, be employed as a refrigerant Remedy in Fever. It is experimentally a soothing

ing Application, a celestial natural Refrigerant, contributing in every view, within moderate limits, to the Plastic Process. (XIV.) It has been much too long cruelly and irrationally debarred by the abettors of the Alexipharmic Practice already reprobated. (LIX.)

## LXXXIX.

## COLD DRINK and FOOD.

The expediency of administering Drink and Aliment of a low Temperature as Remedies in Fever, conducive *directly* to alleviate the Febrile Heat and other Symptoms, from what is premised, is too glaring to require illustration. (LXXXV.) They are necessarily Refrigerant Remedies, more limited and temporary in their application and action than Cold Air, and therefore proportionally less powerful.

## XC.

## COLD BATH.

The application of the Cold Bath, or of Water comparatively of a low Temperature to the cutaneous Surface of the Body, as a direct Refrigerant in Fever, stands incontestibly justifiable upon the same Principles as other cold Applications. It is not easy to conceive why cold Water, applied to the cutaneous Surface or Skin in moderate degree, should not prove a Remedy as usefully refrigerant, as Cold Drink applied to the intestinal Surface or Stomach; and Cold Air applied to the pulmonary Surface or Lungs. In the more frigid Climates, its Application will be superseded generally by that of the Others: Experience has not sufficiently decided on this point as to other circumstances.

## XCI.

## XCI.

Beside the *dietetic* and *natural* refrigerant Remedies already enumerated, as tending to alleviate, as well directly as indirectly, the Enormity of Febrile Temperature, several Drugs or Pharmaceutic Substances have been employed ; because supposed to possess like Powers, they are referable to

1. SIMPLE SALTS.
2. NEUTRAL SALTS.
3. METALLIC SALTS.

## XCII.

The Opinion that the enumerated Pharmaceutic Matters (XCI.) possess refrigerant Powers in Fever, seems to  
this

be not a little *fallacious*, as well in Theory as Practice: If they possess this Quality, they must exert it on one or other of the following Principles:

1. *Directly*, by absorbing a part of the Animal Heat, and proportionally diminishing the Febrile Temperature.

2. *Indirectly*, by a Sedative Action proportionally superseding the accumulation of Heat, whither flowing from Vascular Action, or other Sources.

XCIII.

The comparatively small Quantity or Dose to which the application of Pharmaceutic Matters are necessarily restricted, renders the expectation of their acting advantageously on the first Principle, vain and ridiculous. (XCII.)

XCIV.

## XCIV.

The *direct* evidence that Saline Substances, and consequently the reputed Refrigerants enumerated, (XCI.) possess Qualities, *sensibly stimulant*; and the ambiguous one, that they at the same time possess *sedative* Powers, almost subverts the credibility of their acting on the second Principle. (XCII.)

## XCV.

## SIMPLE SALTS.

Simple Salts are *Acid* or *Alkaline*. The first alone has been supposed to possess Refrigerant Powers: of these the *Vit<sup>riol</sup> Acid* diluted with water, and the *Vegetable Acid*, have been chiefly recommended in Fever as Refrigerant Substances.

## XCVI.

XCVI.

NEUTRAL SALTS.

Of the neutral Salts so named, because Combinations of the *acid* and *alkaline* simple Salts. (XCV.) *Nitre*, or *Salt Petre*, and *Saline Julep*, have obtained most reputation in Fever, as refrigerant Remedies.

XCVII.

METALLIC SALTS.

Of the numerous Metallic Salts, or combinations of the Salts (chiefly the simple and acid Ones) with *Metals*; the *Salt* or *Sugar* of Lead, has singly been mentioned as containing refrigerant Virtues. They are all more likely to be destructive than curative in Fever, for reasons easily assignable.

F

XCVIII.

## XCVIII.

The consideration, that, saline Matters (supposing them to be admitted into the circulating Mass) may increase its *stimulant* Power, in proportion as they augment its *saline* Nature, and consequently, add to vascular Action, which is evidently connected as a *Cause* with animal Heat; throws an additional damp upon the employment of any of them as refrigerant substances in consequence of any *supposed* Sedative Action: especially as Remedies more certainly sedative of Feeling and Motion, and of febrile Heat, in so far as it may depend on these, and less likely to be deranging or destructive to the Plastic Process, (XLV.) are ascertained and procurable.

## XCIX.

## XCIX.

*Altered degree of Sensibility. (XCIX.)*

The circumstances manifesting an alteration of Sensation in Fever, as to *degree* and *equability*, have been enumerated. It is evidently a prime symptom of febrile Derangement of the Nervous System; its Enormity as a Cause is ascertained from the Intensity of its Symptoms which are its Effects.

## C.

The Enormity of febrile Sensibility (XCIX.) (which it would be no difficult task to shew is not seldom a direct and indirect cause of Death) is alleviated.

*Negatively* by

I. REMEDIES recounted under the first Principle of Cure.

F 2

*Positively*

*Positively by*

2. TEPID BATH.

3. DILUTION.

4. OPIUM.

CL.

TEPID BATH.

Water heated or in which Fire is accumulated till its Temperature be more or less raised above that of the Atmosphere, but still below that of the general Surface of the Body, constitutes the TEPID BATH of which *Fomentation, Poultice, &c.* are Modifications.

CII.

Experience universally seems to prove the *soothing* or *anodyne* Power  
of

of the Tepid Bath (CI.) duly regulated. It is not improbable that this Effect is produced by the *Solvent* Power which Water possesses over the cohesion of the simple animal Solid: therefore evidently its application in Fever ought to be as *general* and *continued* as possible; and its Temperature not greater than gently to promote its Solvent Influence: an excess of Temperature is hurtfully deranging.

## XCII.

## DILUTION.

Tepid Drink or Dilution till it be absorbed by the Vessels of the Intestines is the *Tepid Bath* applied to the *external* surface of the Body; after it is received into the Vessels and blended with the Fluids in Circulation, it is the *Tepid Bath* applied to its *internal* or *vascular surface* (so to speak): and therefore its plentiful administration as

Remedy to alleviate febrile Sensibility, is justifiable upon the same Principle with the use of the Tepid Bath. (CI.) It is not easy to conceive, that, its action *within* and *without* the vessels, should not be the same.

## CIV.

## OPIUM.

Few will be bold enough to deny, that OPIUM uniformly produces *soothing* and *anodyne* Effects; or, that, it *diminishes* Sensibility more or less suddenly. Its stimulant effect, (if it possesses any) is *transient*, and therefore to be disregarded; it may justly be characterized,

“ Tir’d Nature’s sweet Restorer.”

Prejudices groundless and fanciful, prevail against its Use: They seem to be derived from the *humoral* Pathology, which chiefly referred  
Disease

Disease to morbid Alterations of the Fluids. Innumerable Facts manifest, that, Opium acts *directly* on the sentient Solid: and, that, in Fever, judiciously administered, it is calculated to produce the most blissful Effects.

## CV.

*Altered State of Sleep. (XXIII.)*

It has been affirmed, that the altered State of Sleep in Fever, may be *Comatose* and *Phrenitic*, or depending on the state of the Circulation of the Fluids: this, with extreme attention, is to be distinguished from an alteration of the State of Sleep originating from febrile Sensibility: (C.) because they demand a curative Treatment diametrically opposite to each other. A mistake may be highly destructive, or even fatal.

## CVI.

## CVI.

Comatose or Phrenitic Sleep, (CV.) obviously demands alleviation from the Remedies detailed as conducive to regulate the Enormity of the Circulation of the Fluids, (LXXV.) proportionally administered.

## CVII.

Altered State of Sleep in Fever, or rather *febrile Watchfulness* depending on altered Sensibility, so detrimental to the Plastic Process, (XIV.) (as is evident from Analogy and Induction) become enormous; is to be alleviated by the Remedies which moderate febrile Sensibility. (CI.)

## CVIII.

## CVIII.

*Disturbed Reflection. (XXIV.)*

It has been mentioned, that Raving, Delirium, or disturbed Reflection, is a very constant, and often a prime symptom of febrile Derangement. It is almost impossible that it should not.

## CIX.

Like the altered State of Sleep, (CV.) febrile Delirium may flow from the state of the Circulation of the Fluids, or the Derangement of the Nervous System;—the former is generally *furiosus*, the other *calm*, and may be named consequently *phrenitic*, and *nervous* or *mild* Delirium. The importance of accurate Discrimination here is obvious. The Enormity of the former is alleviated by the Remedies enumerated to moderate that of the

the Circulation of the Fluids, (LXXIII.)  
the latter by those diminishing febrile  
Sensibility. (CI.)

## CX.

*Putridity.* (XXV.)

The Source, the Symptoms, and the Nature of febrile Putridity have been noticed. It not being a *necessary* but an *accidental* occurrence on Fever, is a circumstance demanding ultimate Attention ; because its very Existence is, as far as may be, to be superseded, and much more, is its Enormity to be alleviated. It is a Power of universal action, always deranging, and often fatally subversive of the Plastic Process. (XLV.) Its prevalence gives to Fever the denominations of *Petechial* or *Spotted*, of *Putrid* and *Malignant*, &c. according to circumstances.

## CXI.

## CXI.

It has already been remarked, that the Alteration or Diminution of Vigour, a prime Symptom, or immediate production of the Proximate Cause of Fever, (XXX.) acquires continual augmentation, from the Accession and Progress of the *putrid saline* or *septic* Process; which generally more or less exists, especially in the more advanced periods of Fever. It probably consists in an *excess of Animalization*; and its debilitating effects flow from its morbidly and radically affecting the composition, structure and cohesion of the Fluids and Solids; proportionally therefore sapping and suffocating the Plastic Process. (XLV.)

## CXII.

The high Importance of counteracting the putrescent Tendency, and of checking

checking and diminishing Putridity in Fever, (XLV.) is necessarily apparent. In Health this is effected by constant supplies of Aliment, especially of such as is considerably remote in quality from the animal Nature, namely, vegetable Substances.

## CXIII.

From what is premised respecting the Nature, the Prevention, and the alleviation of febrile Putridity, (CXI.) it is evident that all antifebrile Remedies, enumerated under one or other of the Principles of Cure, (XLV.) as tending to circumscribe Fever, of which Putridity in a high degree is the Creator or Effect; especially the *dietetic, natural, powerful* Remedies, (the grand healing Agents in Fever) will proportionally prove *antiseptic* or corrective of Putridity.

## CXIV.

## CXIV.

The principal *antiseptic* Remedies in Fever are,

1. VEGETABLES.

2. VINOUS LIQUOR.

3. PHARMACEUTIC SUBSTANCES.

## CXV.

## VEGETABLES.

Daily Experience irrefutably evinces the antiseptic powers of Vegetables in the Animal Oeconomy. In Fever too much attention cannot be paid to administer them of proper Quality and Form in abundance. Their *mealy farinaceous* Parts and *Fruits* are the most proper.

## CXVI.

## VINOUS LIQUOR.

Fermented vinous Liquor of every kind, comprehending the various *Ales*, as well as these commonly called *Wines*, are eminently antiseptic, and of course cordial in Fever, especially after any tendency to Inflammation has been obviated. These would seem to act more from the *nutritious vegetable Matter* than the *ardent Spirit* they contain. It is not easy to conceive how ardent Spirit should produce antiseptic effects on living animal Substance. The degree of Putridity, will indicate the quantity in which Vegetables ought to be employed.

*and vinous Liquor*

## CXVII.

## PHARMACEUTIC SUBSTANCES.

The chief Drugs supposed to be antiseptic in Fever; are

1. PERUVIAN BARK.

2. ACID SIMPLE SALTS.

CXVIII.

PERUVIAN BARK

Peruvian Bark, admitting its antiseptic Power, its influence on febrile Putridity must fall greatly below that of the grand *alimentary* Antiseptics, (C.) it is exceedingly indigestible, of slow Operation, and inadequate to produce great and general effects, in respect of the comparatively small Quantity or Dose to which in its nature it is restricted; Its antiseptic Power, at least to any considerable extent, in the living Body, is not a little *disputable* and *ambiguous*.

CXIX.

ACID SIMPLE SALTS.

The antiseptic Influence of all saline

line Substances over the living Body,  
 is abundantly *ambiguous*; — a con-  
 trary one might with plausibility be  
 dreaded; — the *vitriolic Acid* diluted or  
*Elixir of Vitriol*; — the *fermented* and  
*native Vegetable Acid*, or *Vinegar* and  
*acid Fruit*, formerly mentioned as  
 Refrigerants (LXXXV.); are the simple  
 acid Salts which have been esteemed an-  
 tiseptic in Fever. The small propor-  
 tion, that, in their utmost Dose they  
 bear to the whole animal mass of  
 Fluids and Solids supposed to be af-  
 fected with Putridity, is demonstrative  
 of their comparative Insignificance:  
 especially if it be considered, that  
 they are incapable of nutritious Ap-  
 plication by the animal Process.

THE END.

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*Of the MANNER in which the CHILD  
in the WOMB is CONNECTED with  
its MOTHER, and NOURISHED.*

PROPOSITION I.

**T**HE CHILD or its PLACENTA, is  
not connected to the Womb by  
*a continuation of Vessels*, mutually tran-  
smitting blood.

DEMONSTRATION.

*Fact I.*

About six weeks ago, I injected *mi-  
nutely* the vessels of a Female, Arteries  
and Veins, who, being very distorted,  
had died in Child-bed undelivered;  
the connection of the Placenta and  
Womb, consequently remained undi-  
sturbed.

Upon the most attentive Dissection,

H

not

not a *Particle* of the injected Matter was found in the *Vessels* of the *Placenta*, altho' its penetration had been so complete, that, portions of it were effused between the *Placenta* and the *Womb*, which seemed to have escaped from a few large *Orifices* or *Openings*, which are visibly *vascular Terminations* much dilated, but which had no correspondent *Orifices* in the *Placenta*.

Independent of the Evidence arising from the Injection, the most accurate Inspection, assisted with a Magnifier, could detect no communicating *Vessels*; One, very delicate unfilled with Injection, was perceived, but it seemed to be one of those that are ascertained to originate from the womb, and to be *intermixed* with those of the *Placenta*, but not directly *continued*, or *communicating* with them.

The *Mode* of connection was chiefly by *adhesion* or *contact* of Surfaces, because

cause a very low degree of force sufficed to *separate* the Placenta.

*Fact II.*

About two weeks ago I attended a DELIVERY; it was in every respect *comparatively easy*, although it was, what is called, *preternatural*. I injected *Mercury* or *Quicksilver* into one of the Arteries of the Placenta; it readily passed into both of them, beautifully filling their most minute Branches; from which it returned and filled the Branches and Trunk of the umbilical Vein, (there are two Arteries and one Vein commonly): that is, it followed the *course of the Blood* of the Child through the Vessels of the *detached* Placenta; a circumstance which could not possibly have happened, had their ever existed, a *direct Continuation* betwixt its Vessels and those of the Womb.

PROPOSITION

## PROPOSITION II.

*The CHILD is nourished in the WOMB by ABSORPTION of nutritious matter, performed by the vessels of the PLACENTA from the portion of the SURFACE of the Womb, to which it adheres.*

## DEMONSTRATION.

The Facts detailed above, as well as Induction from Analogy of all Animals, after birth, and Vegetables taking in their Food by absorption, and consequently nourished by it, amount to Demonstration.